

**CHAPTER V: MANIPULATIVE AND BODY-BASED THERAPIES:  
CHIROPRACTIC AND SPINAL MANIPULATION**

Questions & Answers

Q: Have you done research on chronic neurological conditions like muscular dystrophy or multiple sclerosis?

A: There are some case studies and stories about some patients with those conditions being improved by chiropractic care manipulation. However, there have been no formal prospective studies yet.

Q: Have you done any research or intervention with applying kinesiology in muscle?

A: Applied kinesiology is a system of care, much of it used by chiropractors and some other practitioners as well, where they've used a muscle strength test to test for various dysfunction in the body, a very interesting procedure. But we have not, ourselves, done any research on applied kinesiology. There are 4 or 5 studies on the various aspects of that procedure. Some of it is interesting, some of it has come out negative. Again, I think the story is still to be told scientifically.

Q: Can I ask a question about what the difference in the modalities are between physical therapy and spinal manipulation?

A: There are some overlaps between chiropractic and physical therapy. In some way, this answer depends on how you define physical therapy, which like chiropractic, is a profession, not a procedure or set of procedures. It tends to use a lot of exercise therapy—very specific exercise therapy; movement therapy. Some therapists are now doing a lot of spinal mobilization and manipulation techniques, which often require additional training.

Q: With respect to adjustments, is there any research on the relative efficacy of the actual laying on of hands compared with the use of the spring-loaded hammer device?

A: We're actually looking at that right now. From a biomechanical point of view, those first-time profiles, the application by hand and the application by a spring-loaded hammer device, are very similar. The major difference is that the amount of force delivered by the mechanical instrument tends to be consistent every single time, and if you're doing it by hand, you vary the force based on the patient's size, weight, and other factors. So, the machine tends to be a little bit quicker, too. For an experienced operator, manually, the differences are pretty moderate, interestingly enough. In terms of effect, we're not sure, but biomechanically, they look the same.

Q: What do you think is the efficacy of traction in chiropractic treatment?

A: Traction is when you basically pull things apart; it is one of the old-fashioned treatments for back pain. For example, in the hospital, they would apply about 60 pounds of traction to a person's legs and he or she would sit there for a couple of weeks, in an effort to separate the spinal joint and help healing. However, it turns out that traction has very little, if any, impact on the spine, and it can be deleterious to other joints such as the hips. Traction is a relatively nonused therapy. It still has some use for the neck but not for the low back, except very specific methods called flexion/distraction. In the video I showed you, we used a little bit of traction, but most of the operational effect was from movement of the spine, not from traction of the vertebrae.

Q: Is exercise therapy complementary with chiropractic?

A: Yes. In fact, 90% of patients who go to chiropractors also receive an exercise prescription at the same time. The goal is for the locomotive system, which is the muscle and the nerves and the bones and joints, to work better together. If you've got weak muscles, you're going to be putting your joints at risk. Stronger and better-coordinated muscle activity is at least as important in preventing back pain. What we find with

adjustments (manipulations) is that they take people out of pain so they can move better and are actually more able to do their exercises. We don't want to do exercise in very acute back pain cases because the randomized trials have shown that it is probably not helpful. However, once the pain settles down to the point where it's tolerable, or if it is a chronic back pain condition where there are weak muscles, exercise becomes very important. But exercise is not a quick fix, it takes time.

I would add that there is a lot of myth about the abdominal muscles, when it looks like the big culprit is the back muscles themselves—specifically when the extensor muscles are weak. The ratio of the strength of the extensors to the strength of the abdominals is key. When that ratio is out of whack, you've got a problem. Most people have weak extensors, because we sit so much.

Q: What happens if you don't do anything to people over a period of 1 month? Are there any comparisons with injectable epidural steroids?

A: Well, let me take the epidural question first. I believe there are only 3 randomized trials of epidurals right now for back pain. But the kind of back pain that epidural injections are usually used for is pretty much intractable, acute pain that simply is unremitting, and it is causing such a problem for the person that they have to try something. It is not clear that when it's been compared with placebo injections, the epidurals, in fact, have an effect other than the fact they got some sort of surgical or injection of any kind. There may be an effect there. I know in some cases it is very helpful. Many patients have a remission of their back pain after a month or 2 months.

However, in the Cherkin study I showed you, where participants received either physical therapy, chiropractic, or an educational booklet, there were differences in how much of a response there was to each type of intervention. Some people consider an education booklet to be "no treatment." So, part of this may be, how much better does the person want to feel? Also, about 10% to 20% of back pain patients do not get better after a month. Don't forget, we're looking at patient group averages here. There's a range within

each one of those groups obviously. Many patients don't get better. In fact, the natural history of back pain is that it remits and exacerbates and it goes on a cyclical cycle. Many people, even a year later—up to 30% or 40% according to the surveys—still have the problem. It tends to be one of those things that we may live with and we have to figure out ways of managing it as much as anything else.

Q: Your last slide was a summary slide and I believe it said that the preponderance of evidence supported spinal manipulation. The previous slides were of the randomized clinical trials and that was the evidence that you were giving us. Is there additional evidence other than the randomized clinical trials that the summary slide was dealing with?

A: No, there's way more evidence of an observational or anecdotal nature though. There are hundreds and hundreds of publications and studies that are not as well controlled. They're not experimental studies. So, the randomized control trial is an experimental study. We try to control the factors involved to try to draw the cause-and-effect conclusion. They're difficult to do, so they don't always do that. The evidence I showed you is really the highest form of evidence we've got so far. Again, what I haven't shown you here is the evidence for all other treatments for back pain—it's no better and, in most cases, the evidence is much worse. So, it comes down to comparison in a sense.

Q: In conducting randomized trials, do you factor in the experience and knowledge of the chiropractor?

A: We do, but I have to tell you that of the 90 or so trials that have been done, chiropractors have only been involved in about 1/3 to 40% of those. Manipulations and other studies have been done by a variety of different professionals, not that they weren't good at it, it's just that I simply don't know how good they were. Part of the problem in interpreting these studies is that the experience of many of these people was not described. Nor was what they actually did very well described in these studies. So, this is still work that we need to do, and yes, it could be very important, I'm not sure.

Q: Could you comment on maintenance care?

A: Maintenance care is when a chiropractor or physical therapist says that you need to come back every month or so for a tune-up of your spine and try to prevent problems from reoccurring. The short answer is that there is no maintenance care randomized-trial evidence that it will prevent problems down the road. However, it's never been tested either in any standard way, so it may be helpful. I just don't know from a scientific point of view.

I can tell you that many practitioners, and not just chiropractors, believe that it can keep people out of problems. What you will see though in many chiropractic practices is that people come back for a "maintenance test." This is not necessarily directly related to the adjustment itself—they may need some advice about their lifestyle, nutrition, diet, or exercise therapy.

Q: Does manipulation have any benefit on posture?

A: It has not been studied. It seems like a reasonable approach. However, we really don't know scientifically what good posture is. Many of us have a good idea, but there may be different postures or different ranges of posture or parameters that are optimum for each individual. We don't know at this point.

Q: Have there been any studies of chiropractic for scoliosis?

A: Scoliosis is an abnormal curvature of the spine. So far, it doesn't look like chiropractic adjustments change scoliotic curves, at least not to the extent that's clinically important. Changes do happen, but they're within a margin of error of the measurements of those things with x-ray, and we're not sure if those are due to a natural history of the problem or measurement error or the adjustments at this point. But we need x-rays to settle that question and we would like to not do those sorts of things in what tends to be a young

population of people that tend to have those kind of problems. So the studies haven't been done.

Q: Are there any studies on chiropractic for children under the age of 15?

A: Very little. There are some observational studies. There's actually one trial looking at chiropractic for otitis media, but there are no randomized trials of kids under that age except for the 2 trials I mentioned on infantile colic. There's also nothing on the over-age-65 population, by the way, which is something that we really need to tackle as well.

I can tell you that children do get back pain. They do get headaches, way more than you tend to think, and there are some recent epidemiological studies that indicate this. For those kinds of problems, they seem to respond quite readily and I'm telling you this from an anecdotal point of view. I haven't got the studies to prove that .

Q: What about chiropractic for pets?

A: We are pursuing some research using animals right now but there's actually none that I know of on pets. I've seen some cases with Labrador Retrievers and Great Danes that have osteoarthritis of the hips apparently and painful joints of the spine. They seem to be better after treatment. They seem to walk better. Again, this is experiential on my part. I can't prove it, but it would be very interesting to study.